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ABSTRACT

The frustrations of researchers confronted with uncooperative personnel, subjects who leave town, carefully planned controls which collapse, ets. are mentioned. Specifically, the paper is concerned with problems which the author and his colleagues encountered while providing psychological services to rural schools. They included: (1) achieving and maintaining good public relations; (2) the resistance to research activity frequently found in rural areas; (3) distance and consequent need for careful organization and sequencing of events; and (4) problems of data analysis. The use of subjects in rural areas is discussed. The second part of the paper describes the author's research which was concentrated in two areas: (1) the development of a behavior rating scale for identification of problems and assessment of changes; and (2) the comparison of behavior modification peer group counseling and family counseling in the treatment of aggressive elementary school children. The procedure is explained and data presented. Limitations of the research prevented the drawing of any firm conclusions. Difficulties peculiar to the rural setting are viewed as partly responsible for the research's shortcomings. (TL)

THE PSYCHOLOGICAL RESEARCHER IN A RURAL SETTING: PROBLEMS AND LIMITATIONS

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BY

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(Prepared for APGA, 1970)

Those of you who may have had a research project fall apart in the sense that control over important variables seemed to evaporate despite your frantic and extensive efforts to maintain a remote resemblance to the original design, can sympathize with some of the things I will say this morning. At least you will be acquainted with the feelings of frustration and helplessness which come as one is confronted with uncooperative personnel, subjects who leave town, and volunteers who un-volunteer, and as one discovers that his carefully planned controls have collapsed.

While I will briefly discuss some of the problems, considerations, and limitations which are part of conducting research in a rural setting, this is not a "how to do it" paper. Rather, I hope to highlight some of the problems which my colleagues and I have encountered in the research activities we have undertaken while providing psychological services to rural schools.

Research activities are motivated by a number of things--publications, obligation, and even pleasure are among these. Although these may account for a given individual's activities, the pragmatic end of most research is to produce or discover an answer to a question. The planning and execution of a research design are completed with the hope that when the data are in, some meaningful response can be made to the initial query. Which is the better procedure? Does this test measure adjustment? Does

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this treatment bring about improvement? These are generalized forms of the questions often asked. Answering these questions requires attention to all phases of research planning and execution. I will focus upon those that have special importance for research in sparsely populated areas.

The necessity of achieving and maintaining good public relations cannot be over-emphasized. Frequently, the rural community does not share the confidence and/or hope of psychologists, social workers, counselors and others interested in the mental health of its children. Too often, this attitude contributes to and magnifies difficulties already existing for the researcher, especially when the cooperation of school and community is necessary in obtaining subjects, facilities, and time to carry out the project. Mr. Thomas has already alluded to the problem in his presentation.

Similar complications arise when research must rely on the contributions and insights of school personnel, whether they serve as subjects, observers, or merely provide opportunities for the study of students under their care. This is not to suggest that these problems are peculiar to rural areas or universal among them, but rather to point out that resistance to research activity frequently is found there and that care must be taken to cope with the implications that such attitudes have for other aspects of a research activity. To be more specific, unless special care is taken to win the confidence and support of key persons, the data to be gathered are likely to be distorted, incomplete, or even unavailable.

Distance is another factor which must receive adequate consideration in the planning phase. Attention to the careful organization and sequencing of events will help to minimize problems here. It should be apparent that

confusion and delay can easily be introduced by those skeptical of research if good cooperation is not achieved and maintained. Attention must be given to the problem of communication and the delays inherent where long distances are involved. At times (and much to the frustration of the researcher), failures to have data ready when scheduled, missed appointments, etc. seem like deliberate attempts to sabotage the research. While this is no doubt occasionally true, greater attention to public relations and adequate planning would minimize these occurrences.

Most rural or sparsely populated areas also provide challenges for the researcher in terms of data analysis. Computer facilities are usually located at some distance and therefore special preparation of data is required unless the researcher can take it to the computer center himself. In either event, valuable time may be lost in the attendant delays. In addition, if the data suggest the need for alteration in design or procedures, or for additional research to clarify some point, these modifications are unavoidably delayed when the researcher doesn't have immediate and direct access to the data and results of the analysis.

Before turning to some actual data collected by the RCSS staff, I want to briefly discuss the use of subjects in rural areas. Of course, the standard precautions of confidentiality and anonymity prevail, but in addition to these, one must consider the problems in dealing with a limited number of subjects. I think three points are important: First, the availability of subjects in urban settings tends to be greater than in rural locations and thus the possibility of replicating the research is much greater there. In addition, the problem of subject loss, an important concern in any research,

is magnified in rural areas where replacements are difficult, if not impossible, to obtain. Special care must be exercised, then, in planning for subject loss and for its prevention. The second consideration has to do with long-range planning in the use of available subject resources. Research should be designed and coordinated in such a way as to prevent the contamination of subjects which might be used in future projects. Finally, I merely call attention to the fact that subjects drawn from rural areas are likely to differ in certain ways from their urban cousins. Thus, results and conclusions must bear this sampling problem in mind.

The upshot of these three points is twofold: First, careful and judicious use of subjects, coupled with long-range planning, will extend their value and usefulness and, secondly, the researcher must be prepared to carefully select a question that can be answered with the resources at his disposal. Much frustration can be avoided if the available resources are carefully considered before launching a project.

Now to the research itself. The research activity of the RCSS staff has been concentrated in two areas--first, the development of a behavior rating scale for the identification of problems and the assessment of changes in behavior; second, in a comparison of three methods of treatment for aggressive elementary school children. Our limited time does not allow the detailed presentation of data from either of these activities, and since findings relating to the behavior rating scale have already been reported elsewhere[1] and are available to those interested, I will briefly sketch the procedures and findings of our research on the reduction of aggressive behavior.

This particular project grew from frequent referrals for aggressiveness

in the classroom and from a concern for the efficient use of helping personnel. The design consisted of the random assignment of 32 male elementary school children to one of three treatment methods or to a control group. Each of these children had been referred for aggressive behavior in the classroom and received a score on the aggressive factor of a behavior rating scale two or more standard deviations above the mean for referred children.

Treatment methods included behavior modification techniques, peer group counseling, and family counseling. Each of three therapists were randomly assigned to a third of the subjects in each treatment group. In the case of group and family counseling, the therapist worked on an interpersonal level with each client. In behavior modification treatment, the therapist had contact only with the subject's teacher, who was responsible for implementing the program designed in consultation with the therapist. Therapists were required to make a record of time spent in the treatment of subjects with each method throughout the six week treatment period.

Two measures of aggressive behavior were employed--frequency counts of the number of occurrences of specified aggressive behaviors, and teacher ratings on an aggressive behavior scale. The frequency counts were obtained by student observers from a small junior college in the area. Observations were of classroom behavior and took place four days a week for forty minutes per day at approximately the same time each day. Reliability checks indicated that 95% of the observers achieved a reliability of .80 or better in their observations.

The teacher of each referred child made ratings during the collection of baseline data, during the middle week of treatment, and following

the termination of counseling.

Figure one shows the total occurrences of aggressive behavior for each group during the seven-week period. The decline in frequency of occurrence is marked for all groups, including the control group, and is significant at better than the .001 level ($F = 15.34$, $df = 6, 168$). Treatment and control groups did not differ significantly ($F=1.71$, $df = 3,28$), and no significant interaction effects were found ($F < 1.0$).

Figure two shows teacher ratings for each group and their changes during the course of treatment. A picture similar to that found for frequency of aggressive behavior emerges from the analysis of teacher ratings. No differences were found between methods or the control group and no interaction effects were observed ($F's < 1.0$ for both of these tests). The effect of increasing blocks of treatment was significant at better than the .005 level ($F = 3.86$, $df = 6,56$).

It is difficult to interpret these findings, since the control group apparently improved as much as the other groups. Several explanations may account for this particular result.

It is possible that the decline in all groups could be accounted for by a growing laxity on the part of the observers, though in view of the fairly good reliability figures, and the fact that teacher ratings reflect the same general trend, this does not seem a likely explanation. A more probable one is that the control group was confounded to some extent with behavior modification techniques. Prior to the beginning of this research, nearly all the elementary teachers involved attended a workshop where behavior modification principles and techniques were presented and explained

and discussed. In at least one case, the teacher of a control subject had initiated a formalized behavior modification program designed to eliminate his disruptive behavior. It seems likely that this occurred in varying degrees with other control subjects too, even though these teachers were instructed to maintain the same behavior with regard to the children they referred. These conditions render the information obtained from the control group ambiguous in meaning and raise the possibility of confounding in the other treatment methods as well. However, since more frequent contact was maintained with teachers of students in the various treatment groups than with teachers of control subjects, and no similar situations were observed or reported, the probability of confounding in these treatments appears to be at a minimum.

The conditions under which these data were gathered prevent one from drawing any firm conclusions. Certainly it is not possible to answer questions relating to the relative effectiveness of these different treatment methods.

At least one incidental finding appears to have a firm basis. This has to do with the lack of correlation between the data gathered by observers and the teachers' ratings. For both the baseline period and for the final week of treatment the correlation between these two measures was very near zero (.04 and .08, respectively). Evidently, the basis for teachers' ratings of aggressive behavior did not correspond to the number of overt aggressive actions made by the child. Whether this is a function of the particular set of behaviors sampled by the observers, or represents a real difference between the bases for these two measures, is a topic for

further research and clarification.

The shortcomings of this phase of this study place a limit on the usefulness of the obtained data. However, it can serve as an example of the importance of planning for specific difficulties likely to occur when research is conducted in a rural setting. It has been instructive to those of us who have been directly involved and has contributed to certain modifications which have been implemented in the design for a replication.

Additional literature concerning this study and the development of the behavior rating forms is available upon request from the Regional Child Study Services, Drawer AL, Price, Utah 84501.

[1] Donaldson, J. K. - The development of a student behavior rating scale for use by teachers and students to identify problems and changes in behavior. Unpublished doctoral dissertation, Brigham Young University, 1969.

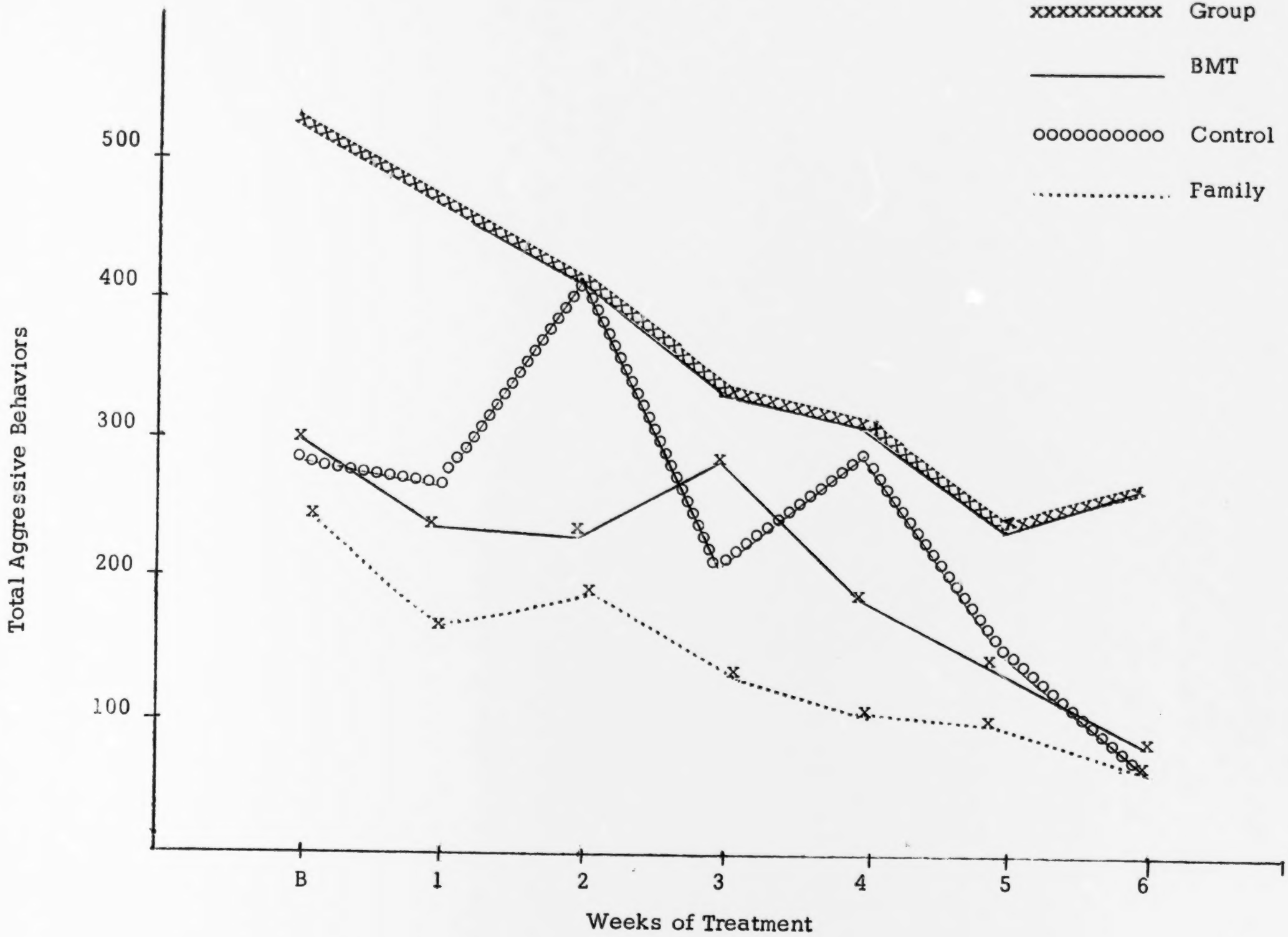
xxxxxxxxxx Group
BMT
oooooooooo Control
..... Family
Total Aggressive Behaviors
500
400
300
200
100
B
1
2
3
4
5
6
Weeks of Treatment

Figure 1

Analysis of Variance (Observers' Data)

Source	SS	df	MS	F
Between Ss	932.30	31		
A (Methods)	144.62	3	48.20	1.71
Ss Within Groups	787.68	28	28.13	
Within Ss	507.59	192		
B (Weeks of Treatment)	192.63	6	32.11	15.34 *
AB	26.35	18	1.46	< 1.0
B x Ss Within Groups	351.61	168	2.09	

* P < .001

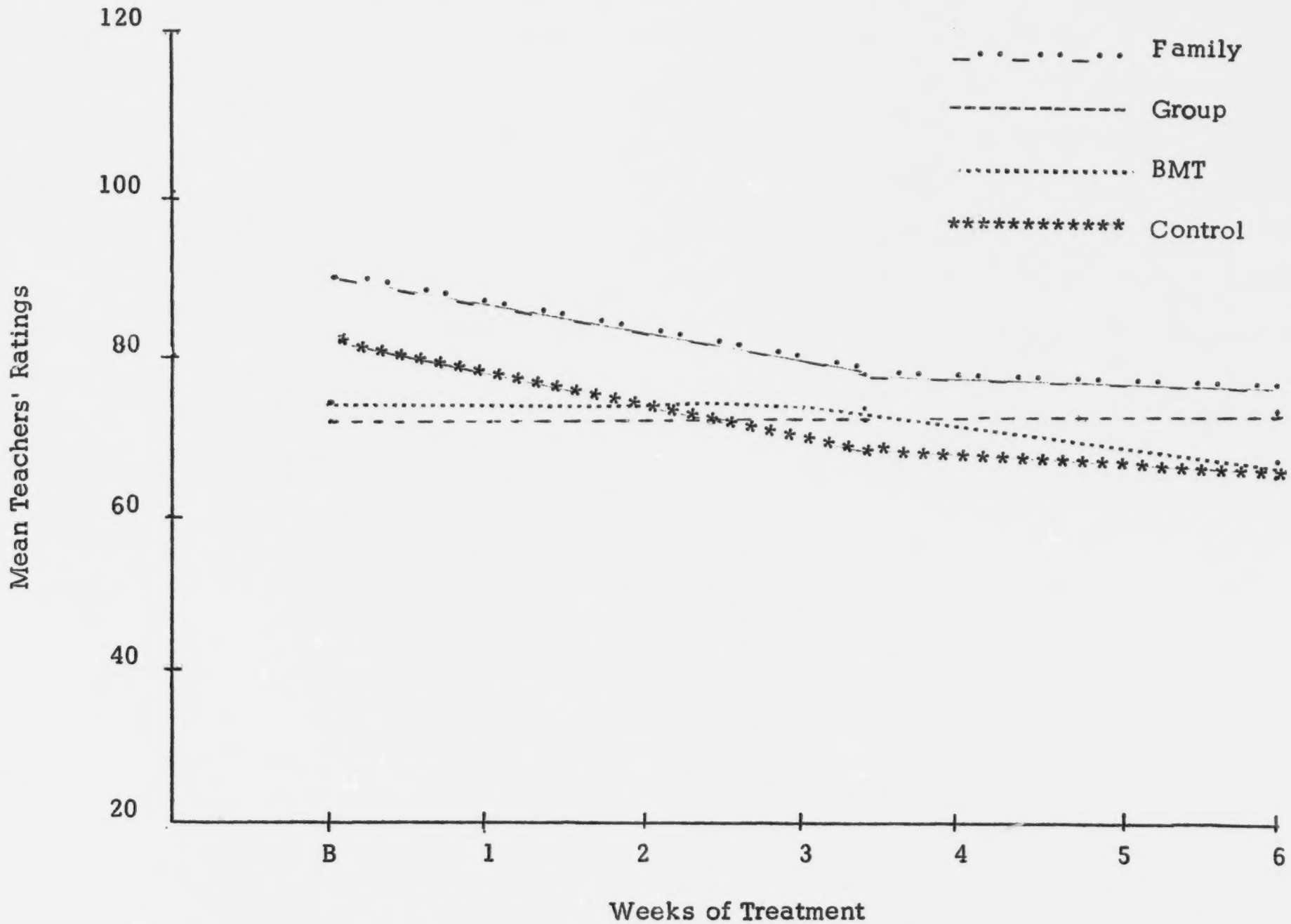
120
100
80
60
40
20
Mean Teachers' Ratings
B
1
2
3
4
5
6
Weeks of Treatment
Family
Group
BMT
Control

Figure 2

Analysis of Variance (Teachers' Ratings)

Source	SS	df	MS	F
Between Ss	20007.41	31		
A (Methods)	1574.17	3	524.72	< 1.0
Ss Within Groups	18433.24	28	658.33	
Within Ss	8619.42	64		
B (Weeks of Treatment)	918.40	2	459.20	3.86 *
AB	713.89	6	118.98	< 1.0
Bx Ss Within Groups	6987.13	56	124.77	

* $P < .05$